

AMENDMENTS TO THE CLAIMS

Note that all the claims currently pending in this application, including those not presently being amended, have been reproduced below for the Examiner's convenience.

1-60. (Cancelled)

61. (Previously Presented) In an optical scanner having a source of a light beam, a deflector for deflecting said light beam and an imaging lens that focuses the deflected light beam to form a beam spot on a surface to be scanned, the improvement wherein the curvatures in a sub-scanning direction of two of the surfaces of said imaging lens vary continuously along a main scanning direction over the effective area of said imaging lens and independently of the curvatures in the main scanning direction, and wherein the curvatures in the main and sub-scanning directions are non-symmetrical with respect to the optical axis.

62. (Previously Presented) In an optical scanner having a source of a light beam, a deflector for deflecting said light beam and an imaging lens that focuses the deflected light beam to form a beam spot on a surface to be scanned, the improvement wherein the curvatures in a sub-scanning direction of two of the surfaces of said imaging lens vary continuously along a main scanning direction over the effective area of said imaging lens and independently of the curvatures in the main scanning direction, and wherein the curvatures in the main and sub-scanning directions are non-symmetrical with respect to the optical axis, wherein the optical magnification of said imaging lens in the sub-scanning direction is constant over the effective scanning region.

63. (Previously Presented) In an optical scanner having a source of a light beam, a deflector for deflecting said light beam and an imaging lens that focuses the deflected light beam to form a beam spot on a surface to be scanned, the improvement wherein the curvatures in a sub-scanning direction of two of the surfaces of said imaging lens vary continuously along a main scanning direction over the effective area of said imaging lens and independently of the curvatures in the main scanning direction, and wherein the curvatures in the main and sub-scanning directions are non-symmetrical with respect to the optical axis, wherein said imaging lens is a single lens.

64. (Previously Presented) An optical scanner according to claim 63, wherein said imaging lens satisfies the following requirement:

the entrance face of said imaging lens has a cross section taken in the sub-scanning direction which is concave at the center of scanning and convex at either end of scanning.

65. (Previously Presented) An optical scanner according to claim 64, wherein said imaging lens has a surface that is aspheric in the main scanning direction.

66. (Previously Presented) An optical scanner according to claim 65, wherein said imaging lens has a surface having a point of inflection in the main scanning direction.

67. (Previously Presented) An optical scanner according to claim 65, wherein said light source has a plurality of light-emitting portions.

68. (Previously Presented) An optical scanner according to claim 67, wherein that element of the imaging lens which has such a surface that the curvature in the sub-scanning direction varies continuously along the main scanning direction over the effective area of said imaging lens is made of plastic.

69. (Previously Presented) An optical scanner according to claim 61, wherein said imaging lens has a surface that is aspheric in the main scanning direction.

70. (Previously Presented) In an optical scanner having a source of a light beam, a deflector for deflecting said light beam and an imaging lens that focuses the deflected light beam to form a beam spot on a surface to be scanned, the improvement wherein the curvatures in a sub-scanning direction of two of the surfaces of said imaging lens vary continuously along a main scanning direction over the effective area of said imaging lens and independently of the curvatures in the main scanning direction, and wherein the curvatures in the main and sub-scanning directions are non-symmetrical with respect to the optical axis,

wherein said imaging lens has a surface that is aspheric in the main scanning direction, and

wherein said imaging lens has a surface having a point of inflection in the main scanning direction.

71. (Previously Presented) An optical scanner according to claim 61, wherein said light source has a plurality of light-emitting portions.

72. (Previously Presented) An optical scanner according to claim 71, wherein that element of the imaging lens which has such a surface that the curvature in the sub-scanning direction varies continuously along the main scanning direction over the effective area of said imaging lens is made of plastic.

73. (Previously Presented) An optical scanner having a source of a light beam, a deflector for deflecting said light beam and an imaging lens that focuses the deflected light beam to form a beam spot on a surface to be scanned, the improvement wherein the curvatures in a sub-scanning direction of two of the surfaces of said imaging lens vary continuously along a main scanning direction over the effective area of said imaging lens and independently of the curvatures in the main scanning direction, and wherein the curvatures in the main and sub-scanning directions are non-symmetrical with respect to the optical axis,

wherein the optical magnification of said imaging lens in the sub-scanning direction is constant over the effective scanning region, and

wherein said imaging lens is a single lens.

74. (Previously Presented) An optical scanner according to claim 73, wherein said imaging lens satisfies the following requirement:

the entrance face of said imaging lens has a cross section taken in the sub-scanning direction which is concave at the center of scanning and convex at either end of scanning.

75. (Previously Presented) An optical scanner according to claim 74, wherein said imaging lens has a surface that is aspheric in the main scanning direction.

76. (Previously Presented) An optical scanner according to claim 75, wherein said imaging lens has a surface having a point of inflection in the main scanning direction.

77. (Previously Presented) An optical scanner according to claim 75, wherein said light source has a plurality of light-emitting portions.

78. (Previously Presented) An optical scanner according to claim 77, wherein that element of the imaging lens which has such a surface that the curvature in the sub-scanning direction varies continuously along the main scanning direction over the effective area of said imaging lens is made of plastic.